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THE DISTRIBUTION OF THE GENUS VITIS IN KANSAS.

BY A. S. HITCHCOCK, STATE AGRICULTURAL COLLEGE, MANHATTAN.

So far as I have been able to ascertain, the genus *Vitis* is represented in Kansas by five species, excluding the widely-distributed *Vitis indivisa*, which is placed by American botanists under *Cissus ampelopsis*.

Linnaeus described but two species of *Vitis* from North America—*V. labrusca* and *V. vulpina*—neither of which I have seen in Kansas.

Three of our species were first described by Michaux in his *Flora Boreali Americana*, vol. II, pp. 230 and 231 (1803).

V. æstivalis Mx. Fl.—Of this Michaux says, in his original description, translating from the Latin: "Leaves widely cordate, 3-5 lobed, sparsely tomentose beneath, hairs red, sinus obtusely rounded, fertile racemes, oblong, fruit small. Commonly called summer grape. Habitat in woods from Virginia to Carolina."

This is a high climber, with large, frequently deeply-lobed, leaves, which, with age, tend to become glaucous beneath, and, in the variety *bicolor*, are conspicuously so. The canes are smooth and more or less glaucous. The fruit is larger than that of any other species we have, and is very pleasantly flavored. Some of the berries gathered at Baxter Springs, Cherokee county, would make a very fair table fruit, and it seems deserving of cultivation. It occurs in Johnson and Cherokee counties, and probably more or less through the eastern tier of counties, from the Missouri river south. In Cherokee county, the variety *bicolor* is abundant.

V. cinerea Engelm.—This was first described by Doctor Engelmann as a variety of *V. æstivalis* (Gray's Manual, ed. 5, 1868). He afterwards raised it to the rank of a distinct species. It is easily distinguished from *V. æstivalis*, which it closely resembles, by the branchlets being loosely woolly, the leaves being scarcely at all lobed, and the pubescence ashy and not red. The fruit is small, and ripens late in the fall, being still green when the fruit of *V. æstivalis* is ripe—the latter part of July in Cherokee county. It occurs in the following counties: Atchison, Wyandotte, Johnson, Miami, Linn, Bourbon, Cherokee, Labette, Montgomery, Jackson, Shawnee, Greenwood, Riley, and Norton, thus being quite general through eastern Kansas.

V. cordifolia Mx.—This is described by Michaux as follows: "Leaves cordate, acuminate, subequally dentate, glabrous both sides, raceme laxly many flowered, berries small, ripening late. Called by the inhabitants, 'winter grape.' Habitat from Pennsylvania to Florida."

This occurs over nearly the same range as the previous species—Doniphan, Atchison, Miami, Linn, Bourbon, Cherokee, Labette, Montgomery, Greenwood, Potawatomie, and Riley.

V. riparia Mx.—Michaux characterizes this species as follows: "Leaves unequally incisely dentate, shortly three-lobed, petioles, nerves and margins pubescent. Called by the French inhabitants, 'sand-bank grape.' Habitat along rivers and on river islands in Ohio, Mississippi, etc."

This is the most widely-distributed grape in Kansas, occurring throughout the State as far west as Barber and Decatur counties.

This species has often been confounded with *V. cordifolia*, but is easily distinguished by the leaf characters brought out by Michaux. *V. cordifolia* has the teeth nearly equal, while in *V. riparia* the teeth are quite unequal and the leaf is more or less three lobed, the lobes being acuminate. The leaves of *V. cordifolia* are sometimes deeply lobed, but the lobes are not so acuminate and the sinuses are rounded.

The character of the teeth is quite constant. The fruit of *V. riparia* is ripe here in August, while that of *V. cordifolia* is not ripe till late in the fall.

V. novo-mexicana.—This is represented by specimens from Hamilton and Barber counties, in southwestern Kansas. I found it also in Montgomery county, along a railroad track, where it was apparently introduced. It is characterized by a shrubby habit and leaves of *V. riparia*, but woolly on both sides, as are the canes. The wool is more or less deciduous on the old portions. The specimens were gathered in July, at which time berries were apparently full grown, but still green. Bunches short and compact.

A LIST OF FLOWERING PLANTS AND FERNS.

[Collected in Franklin county, Kansas, during the months of April, May, September, and October, 1890-'92.]

BY W. E. CASTLE, OTTAWA, KAS.

EXPLANATION: In the following list, the nomenclature of Gray's Manual, sixth edition, has been followed.

Every plant included in the list has been seen and identified by the author, with one exception, which is noted. Dried specimens of nearly all are in the author's herbarium. In cases of doubtful identity, comparison has been made with the herbaria of Harvard University and the Missouri Botanical Garden. Acknowledgment of valuable assistance is due to Mr. Herbert L. Jones, of Cambridge, Mass., Dr. Wm. Trelease, of St. Louis, and others.

As many of the plants were collected when in fruit or before blossoming, the time of collection has not been thought of sufficient value for insertion; for the benefit, however, of future botanical students in the vicinity of Ottawa, the place of collection has been indicated with considerable exactness. The letters, A to K, refer to the following localities:

A, the college farm, just outside the corporate limits of Ottawa, on the south, and thence along the south bank of Rock creek to the Marais des Cygnes river; soil stony, untimbered.

B, more or less wooded banks of Rock creek, on the college farm and between the college farm and the river.

C, shaded banks of the Marais des Cygnes, between Ottawa and the mouth of Rock creek.

D, swampy ground on the north bank of Rock creek near its mouth.

E, on or among the sandstone hills about three miles southwest of Ottawa.

F, alluvial soil, about one mile west of Main street, Ottawa.

G, Forest Park, on the north bank of the Marais des Cygnes, in the city of Ottawa; open woods.

H, banks of Skunk run, city of Ottawa.

I, Missouri Pacific railroad track, between Ottawa and Rock creek.

K, streets of Ottawa.

The underlying rock is everywhere limestone, except at station E, where it is sandstone.